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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/987,693      | 11/15/2001  | James D. Thornsberry | 2334-200            | 7177             |

7590 03/02/2004

NIXON & VANDERHYE P.C.  
8th Floor  
1100 North Glebe Road  
Arlington, VA 22201

EXAMINER

CHANG, VICTOR S

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1771

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |                    |  |
|------------------------------|-----------------|--------------------|--|
| <b>Office Action Summary</b> | Application No. | Applicant(s)       |  |
|                              | 09/987,693      | THORNSBERRY ET AL. |  |
|                              | Examiner        | Art Unit           |  |
|                              | Victor S Chang  | 1771               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-8 and 10-23 is/are pending in the application.
- 4a) Of the above claim(s) 14-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-8, 10-13 and 20-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. The Examiner has carefully considered Applicants' amendments and remarks filed on 1/9/2004. Applicants' amendments claims 2-5, 7, 8, 10-13, 20 and 21, cancellation of claims 1 and 9, and newly added claims 22 and 23 have all been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Rejections not maintained are withdrawn. In particular, Applicants' argument that DiGuseppi teaches "O,O-dimethylmethylphosphonate is not used alone, but significantly is used with two other ... stronger dipolar solvents" (Remarks, page 9, third full paragraph) is persuasive. As such, the rejection of section 7, Paper No.0903 is withdrawn.

### ***Claim Rejections - 35 USC § 112***

4. Claims 2-8, 10-13 and 20-23 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for GRF facer and coated glass (Table 1) and polyurethane modified polyisocyanurate foam board, does not reasonably provide enablement for each of the element "facers" and "a closed-cell foam core" as genus per se. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

More particularly, claims 2-8, 10-13 and 20-23 are directed to foam boards with "facers" on each outer surface. However, the Specification only discloses experimental results on glass surface, i.e., GRF facer and coated glass (Table 1), which is not considered sufficient to represent various other facer materials, such as paper, metal foil, and plastic film, etc., and the Specification lacks any explicit or implicit teaching that other facer materials are also applicable, and particularly there is no teaching or understanding as to how the instantly claimed DBE solvents improve the adhesion between the facers and the foam core. As such, the absence of "GRF facer" in independent claims 20 and 23 renders the claimed invention unduly broad and in excess of its provided enablement. It should be noted that the written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species by actual reduction to practice ... by functional characteristics coupled with a known or disclosed correlation between function and structure ... sufficient to show the applicant was in possession of the claimed genus. If a representative number of adequately described species are not disclosed for a genus, the claim to that genus must be rejected as lacking adequate written description under 35 U.S.C. 112, first paragraph. See MPEP § 2163.IIA3(a)ii.

Similarly, the Specification only discloses thermosetting foams of polyurethane modified polyisocyanurate foams, which is not considered sufficient to represent various other closed-cell foam core materials, such as epoxy foams, etc., and the Specification lacks any explicit or implicit teaching that all types of "thermosetting closed-cell foams" are applicable. Appropriate correction is required.

Finally, claim 2 is rejected under 35 U.S.C. 112, first paragraph, because the Specification does not reasonably provide enablement for a polyurethane foam board, and renders claim 2 in excess of its provided enablement. In particular, the Specification only teaches polyurethane modified polyisocyanurate foams, nowhere is there an express or implicit teaching of a polyurethane foam core.

5. Claims 2, 3, 10-13, 20, 21 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, and throughout the remaining claims, the Examiner suggests to change "polyurethane laminated foam board" to --laminated polyurethane foam board--, so as to further clarify in instant invention having a polyurethane foam core. Similar change is suggested for claims 3 and 23.

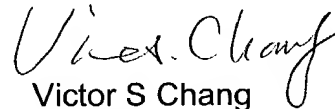
Additionally, in claim 23, the Examiner suggests to insert --polyurethane modified polyisocyanurate-- after "close-cell", so as to clarify the scope of the claimed element.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1771

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Victor S Chang  
Examiner  
Art Unit 1771

2/25/04